ELSEVIER

Geoderma 94 (2000) 355–356

GEODERMA

Contents Volume 94, 2000

Research Papers

Influence of parent material and grain size on carbonate coatings in gravelly soils, Palo Duro Wash, New Mexico
C. Treadwell-Steitz and L.D. McFadden 1

Sulfur and zinc levels as limiting factors to rice production in West Africa lowlands
M.M. Buri, T. Masunaga and T. Wakatsuki 23

Spatial and temporal changes of soil C after establishment of a pasture on a long-term cultivated vertisol (Martinique)
T. Chevallier, M. Voltz, E. Blanchart, J.L. Chotte, V. Eschenbrenner, M. Mahieu and A. Albrecht . 43

Effects of sample pretreatment and sequential fractionation by centrifuge drainage on concentrations of minerals in a calcareous soil solution
G. Tyler. 59

Effect of fire and soil texture on soil carbon in a sub-humid savanna (Matopos, Zimbabwe)
M.I. Bird, E.M. Veenendaal, C. Moyo, J. Lloyd and P. Frost 71

Special Issue

THE PODZOLIZATION PROCESS

Preface v

The podzolization process. A review
U.S. Lundström, N. van Breemen and D. Bain 91

General description of the sampling techniques and the sites investigated in the Fennoscandinavian podzolization project
H. Ilvesniemi, R. Giesler, P. van Hees, T. Magnussson and P.A. Melkerud 109

Chemical, mineralogical and morphological characterization of three podzols developed on glacial deposits in Northern Europe
P.-A. Melkerud, D.C. Bain, A.G. Jongmans and T. Tarvainen 125

Weathering in three podzolized pedons on glacial deposits in northern Sweden and central Finland
M.T. Olsson and P.-A. Melkerud 149

Do plants drive podzolization via rock-eating mycorrhizal fungi?
N. van Breemen, U.S. Lundström and A.G. Jongmans 163

Low molecular weight organic acids and their Al-complexes in soil solution—composition, distribution and seasonal variation in three podzolized soils
P.A.W. van Hees, U.S. Lundström and R. Giesler 173

Equilibrium models of aluminium and iron complexation with different organic acids in soil solution
P.A.W. van Hees and U.S. Lundström 201

The acid–base properties of high and low molecular weight organic acids in soil solutions of podzolic soils
A. Bergelin, P.A.W. van Hees, O. Wahlberg and U.S. Lundström 223

Mobility of different size fractions of organic carbon, Al, Fe, Mn and Si in podzols
G. Riise, P. Van Hees, U. Lundström and L. Tau Strand 237
Distribution and mobilization of Al, Fe and Si in three podzolic soil profiles in relation to the humus layer
R. Giesler, H. Ilvesniemi, L. Nyberg, P. van Hees, M. Starr, K. Bishop, T. Kareinen and U.S. Lundström. 249
Surface reactivity of poorly-ordered minerals in podzol B horizons
E. Karltun, D.C. Bain, J.P. Gustafsson, H. Mannerkoski, E. Murad, U. Wagner, A.R. Fraser, W.J. McHardy and M. Starr 265
Factors influencing aluminium concentrations in soil solution from podzols
P.A.W. van Hees, U.S. Lundström, M. Starr and R. Giesler 289
Partitioning of base cations and sulphate between solid and dissolved phases in three podzolised forest soils
J.P. Gustafsson, P. van Hees, M. Starr, E. Karltun and U. Lundström 311
Advances in understanding the podzolization process resulting from a multidisciplinary study of three coniferous forest soils in the Nordic Countries
U.S. Lundström, N. van Breemen, D.C. Bain, P.A.W. van Hees, R. Giesler, J.P. Gustafsson, H. Ilvesniemi, E. Karltun, P.-A. Melkerud, M. Olsson, G. Riise, O. Wahlberg, A. Bergelin, K. Bishop, R. Finlay, A.G. Jongmans, T. Magnusson, H. Mannerkoski, A. Nordgren, L. Nyberg, M. Starr and L. Tau Strand 335

Contents Volume 94, 2000 355